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32294 7590 11/25/2008 SQUIRE, SANDERS & DEMPSEY L.L.P. 8000 TOWERS CRESCENT DRIVE 14TH FLOOR VIENNA, VA 22182-6212				
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NGUYEN, PHUONGCHAU BA				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/014,153

Applicant(s)

VIERO, TIMO

Examiner

PHUONGCHAU BA NGUYEN

Art Unit

2416

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 01 November 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 35-40, 42-48, 51, 53, 55, -57, 59-62, 64-66, 74-80 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 43-47, 51 and 76-80 is/are allowed.
- 6) ☒ Claim(s) 36-40, 42, 53, 55-57, 59-62, 64-66, 74 and 75 is/are rejected.
- 7) ☒ Claim(s) 35 and 59-62 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

***Allowable Subject Matter***

1. The indicated allowability of claims 36-37, 53, 55, 64-66 is withdrawn in view of the newly discovered reference(s) to Wu (6,836,469) & Gustafsson (6,643,275). Rejections based on the newly cited reference(s) follow.

***Claim Rejections – 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 59-62, 64-66 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 64 recites the limitation "said determiner" in line 14. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections – 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35

U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 59–62, 64–66 are rejected under 35 U.S.C. 102(e) as being anticipated by Watanabe (6,285,662).

Regarding claim 64:

Watanabe discloses an apparatus comprising:

a receiver configured to receive from a network element (base transceiver station AP 14) a parameter (a number of timeslot allocated to form random access channel, see col.3, line 66–col.4, line 9) defining allowed access slots (the number of allocated timeslots) of a physically random access channel (RACH) for a random access operation;

processor configured to determine (selecting) said allowed access (timeslot defining random access channels of MAC frame) of the physically existing random access channel based on said parameter (allocated timeslots) {col.3, line 66–col.4, line 9} from the network element (base transceiver station AP 14);

transmitter configured to initiate transmission of a random access message (transmitted packet data upon the random access channel of permitted random access, col.4, lines 14–40) to said network element (base transceiver station A)P 14) at least one of said determined allowed access slots

of physically existing random access channel–RACH (from any mobile station having the permitted random access slots);

the processor is further configured to randomly select an uplink access slot to be used for transmitting a preamble of said random access message from the allowed access slots of the physically existing random access channel determined by said ~~determiner~~ processor (emphasis corrected), see col.9, lines 12–26, wherein the frame transmitting on uplink access slot inherently having preamble, emphasis added.

wherein consecutive preambles are transmitted a predetermined number of access slots apart (the selected time slot are dynamically allocated on a frame by frame basis, see col.3, line 66–col.4, line 9, thus their preambles would have been selectively transmitted corresponding to the dynamical allocation of the selected slots, emphasis added).

Regarding claim 59: Watanabe further discloses wherein said parameter is received via a broadcast channel {col.5, lines 39–45}.

Regarding claim 60: Watanabe further discloses configuring to determine said allowed access slots (see col.8, line 61–col.9, line 11 wherein the number of timeslot that would be available for accessed, emphasis added) of the physically existing random access channel on the basis of said received parameter and a timing parameter received via broadcast channel (broadcasting, col.8, lines 61–66).

Regarding claims 61–62: Watanabe further discloses wherein an index of an allowed uplink access slot is determined on the basis of a value of said parameter irrespective of a frame number of a frame used to transmit an uplink access slot (the allocated timeslot is the index, col.4, lines 16–19).

Regarding claim 65: Watanabe further discloses wherein said predetermined number depends on a timing parameter value (the number of timeslot that would be available for accessed) received by said receiver, see col.8, line 61–col.9, line 11.

Regarding claim 66: Watanabe further discloses wherein said processor is further configured to perform said random selection anytime a preamble needs to be transmitted (see abstract wherein the number of timeslots allocated to form random access channels in a frame is selectably variable in a dynamic manner, see also col.8, line 61–col.9, lines 11 & 21–26, in other word, anytime data frame/packet, which inherently having the preamble–emphasis added, needed to be transmitted, the data frame/packet could be transmitted randomly on the available of the allocated timeslots).

***Claim Rejections – 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.



7. Claims 36-42, 48, 53, 55-57, 74-75 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe (6285662).

Regarding claims 36, 74:

Watanabe discloses a method comprising:

receiving a parameter (a number of timeslot allocated to form random access channel, see col.3, line 66-col.4, line 9) defining allowed access slots of a physically existing random access channel (RACH) from a base transceiver station AP 14 in a mobile communications network (fig.1) by at least a mobile stations (MS-12) of a plurality of mobile stations MS-120 of the mobile communications network (fig.1);

determining (selecting), at said at least one mobile station (MS-12, fig.1), said allowed access (timeslot defining random access channels of MAC frame) of the physically existing random access channel based on said parameter (allocated timeslots) {col.3, line 66-col.4, line 9}; and

using (the allocated timeslots), at said at least one mobile station, the physically existing random access channel (of the random access channels) to initiate (transmitted packet data upon the random access channel of permitted

random access, col.4, lines 14–40) a random access operation (to any mobile station having the permitted random access slots) with said base transceiver station (AP-14).

Watanabe further discloses in column 4, lines 4–6 wherein an indication of the number of time slots allocated to form random access channel in that frame is broadcast to the sending station in BRAN (broadband radio access network), also see broadcasting in col.8, lines 61–66, corresponding to “receiving said parameter via a broadcast channel.”

Watanabe does not explicitly disclose wherein said broadcast channel is a broadcast channel of a wideband code division multiple access system. However, in the same field of endeavor, Gustafsson discloses processing multiple random access calls in a CDMA or WCDMA system, col.1, lines 9–12. Therefore, it would have been obvious to an artisan to apply Gustafsson’s teaching to Watanabe’s system to achieve the missing limitation of broadcast channel in a WCDMA system with the motivation being to provide simultaneously random access requests by different MSs (mobile stations) and provide higher traffic density on random access channels (RACHs).

Regarding claim 38: Watanabe further discloses wherein said parameter defines a subset of available access slots of said mobile communication network (the allocated timeslot on the random access channel, col.5, lines 18-35).

Regarding claim 39: Watanabe further discloses wherein said subset is determined by another parameter transmitted from said base transceiver station to said mobile station (col.4, lines 16-19).

Regarding claim 40: Watanabe further discloses wherein said other parameter is a timing parameter defining *a transmission timing of an uplink access slot* (*allocated timeslot* on the random access channel, col.4, lines 16-19).

Regarding claim 41: Watanabe further discloses wherein said other parameter is transmitted via a broadcast channel (col.4, lines 10-16).

Regarding claim 42: Watanabe further discloses wherein the bit number of said parameter is changed in dependence on said other parameter (col.16-40, parameter changing because of collision).

Regarding claims 48: Watanabe further discloses wherein an index of an allowed uplink access slot is determined on the basis of a value of said parameter irrespective of a frame number of a frame used to transmit an uplink access slot (the allocated timeslot is the index, col.4, lines 16-19).

Regarding claims 37, 75:

Watanabe discloses a method comprising:

receiving a parameter (a number of timeslot allocated to form random access channel, see col.3, line 66-col.4, line 9) defining allowed access slots of a physically existing random access channel (RACH) from a base transceiver station AP 14 in a mobile communications network (fig.1) by at least a mobile

stations (MS-12) of a plurality of mobile stations MS-120 of the mobile communications network (fig.1);

determining (selecting), at said at least one mobile station (MS-12, fig.1), said allowed access (timeslot defining random access channels of MAC frame) of the physically existing random access channel based on said parameter (allocated timeslots) {col.3, line 66–col.4, line 9}; and

using (the allocated timeslots), at said at least one mobile station, the physically existing random access channel (of the random access channels) to initiate (transmitted packet data upon the random access channel of permitted random access, col.4, lines 14–40) a random access operation (to any mobile station having the permitted random access slots) with said base transceiver station (AP-14).

Watanabe further discloses in column 4, lines 4–6 wherein an indication of the number of time slots allocated to form random access channel in that frame is broadcast to the sending station in BRAN (broadband radio access network), also see broadcasting in col.8, lines 61–66, corresponding to “receiving said parameter via a broadcast channel.”

Watanabe does not explicitly disclose wherein initiating said random access operation via physical random access channel uplink and an acquisition indication channel downlink of the wideband code division multiple access system. However, in the same field of endeavor, Gustafsson discloses processing multiple random access calls in a CDMA or WCDMA system, col.1, lines 9-12. Therefore, it would have been obvious to an artisan to apply Gustafsson's teaching to Watanabe's system to achieve the missing limitation of broadcast channel in a WCDMA system with the motivation being to provide simultaneously random access requests by different MSs (mobile stations) and provide higher traffic density on random access channels (RACHs).

Regarding claim 53:

Watanabe discloses a system for performing random access in a mobile communication network, comprising:

a base transceiver station AP14-fig.1 configured to receive a parameter (allocated timeslots) of a physically existing random access channel (RACH) (col.9, lines 12-26) and

a plurality of mobile stations (MS12) configured to receive said parameter, for determining said allowed access slot of the physically existing random access channel based on said parameter (allocated timeslots, col.9, lines 12-26), and to use at least one of said determined allowed access slots of the physically existing random access channel to initiate a random access operation with said base transceiver station AP14-fig.1 (col.6, lines 12-26; also see fig.3).

Watanabe does not explicitly disclose wherein said base transceiver station is a wideband code division multiple access base transceiver station and said plurality of mobile stations are wideband code division multiple access mobile stations. However, in the same field of endeavor, Gustafsson discloses processing multiple random access calls between base station and mobile stations in a CDMA or WCDMA system, col.1, lines 7-12 & col.6, lines 3-21. Therefore, it would have been obvious to an artisan to apply Gustafsson's teaching to Watanabe's system to achieve the missing limitation of broadcast channel in a WCDMA system with the motivation being to provide

simultaneously random access requests by different MSs (mobile stations) and provide higher traffic density on random access channels (RACHs).

Regarding claim 55:

Watanabe discloses an apparatus (AP14-fig.1) for a mobile communication network comprising a plurality of mobile stations (MS12-fig.1), comprising:

setting means (col.8, line 61-col.9, line 2) for setting a parameter defining allowed access slots a physically existing random access channel (RACH), wherein at least one mobile station initiates a random access operation to the apparatus based on the allowed access slots of the physically existing random access channel (col.9, lines 2-10); and

transmitting means (broadcasting, col.8, lines 61-66) for transmitting said parameter to said plurality of mobile stations (MS12-fig.1).

Watanabe does not explicitly disclose wherein said apparatus is a wideband code division multiple access system. However, in the same field of endeavor, Gustafsson discloses processing multiple random access calls



between base station and mobile stations in a CDMA or WCDMA system, col.1, lines 9-12. Therefore, it would have been obvious to an artisan to apply Gustafsson's teaching to Watanabe's system to achieve the missing limitation of broadcast channel in a WCDMA system with the motivation being to provide simultaneously random access requests by different MSs (mobile stations) and provide higher traffic density on random access channels (RACHs).

Regarding claim 56: Watanabe further discloses wherein said transmitting means to transmit said parameter via a broadcast channel (broadcasting, col.8, lines 61-66).

Regarding claim 57: Watanabe further discloses wherein said setting means (col.8, line 61-col.9, line 2) to set said parameter in dependence on a timing parameter value (the number of timeslot that would be available for accessed) defining a transmission timing of an uplink access slot in said random access operation.

***Allowable Subject Matter***

8. Claims 35, 43-47, 51, 76-80 are allowed.
9. The following is an examiner's statement of reasons for allowance:

Regarding claims 43 and 35, the prior art fails to teach a method, comprising: receiving a parameter defining allowed access slots of a physically existing random access channel from a base transceiver station of a mobile communications network by at least one mobile station of a plurality of mobile stations of the mobile communications network; "said parameter defines a subset of available access slots of said mobile communications network; determining said subset by another parameter transmitted from said base transceiver station to said mobile station; changing a bit number of said parameter in dependence on said other parameter; and disabling a transmission of a preamble signature or an acquisition indication in dependence on a value of said parameter," which is considered in combination with other limitations, as specified as, in the independent claim 43.

Regarding claim 44, the prior art fails to teach a method, comprising: receiving a parameter defining allowed access slots of a physically existing

random access channel from a base transceiver station of a mobile communications network by at least one mobile station of a plurality of mobile stations of the mobile communications network; "determining said subset by another parameter transmitted from said base transceiver station to said mobile station; changing a bit number of said parameter in dependence on said other parameter; and calculating an index of an allowed uplink access slot on the basis of a value of said parameter and a frame number of a frame used for transmitting an uplink access slot," , " which is considered in combination with other limitations, as specified as, in the independent claim 44.

Regarding claims 45 and 47, the prior art fails to teach a method, comprising: receiving a parameter defining-allowed access slots of a physically existing random access channel from a base transceiver station of a mobile communications network by at least one mobile station of a plurality of mobile stations of the mobile communications network; "wherein a bit number of said parameter is changed in dependence on said other parameter, wherein an index of an allowed uplink access slot is calculated on the basis of the value of said parameter and a frame number of a frame used for transmitting an uplink

access slot, wherein said index is calculated by using the equation  $i = 3 \cdot N + (F \text{ modulo } 3)$  where  $0 \leq N \leq 2$ , wherein F and N are integers, and F denotes said frame number, and wherein only access slots having indices within the range 0 to 7 are valid," which is considered in combination with other limitations, as specified as, in the independent claim 45.

Regarding claim 46, the prior art fails to teach a method, comprising: receiving a parameter defining allowed access slots of a physically existing random access channel from a base transceiver station of a mobile communications network by at least one mobile station of a plurality of mobile stations of the mobile communications network; "wherein a bit number of said parameter is changed in dependence on said other parameter, wherein an index of an allowed uplink access slot is calculated on the basis of the value of said parameter and a frame number of a frame used for transmitting an uplink access slot, wherein said index is calculated by using the equation  $i = 4 \cdot N + (F \text{ modulo } 4)$  where  $0 \leq N \leq 3$ , wherein F and N are integers, and F denotes a frame number indicating two consecutive frame numbers of said frame used to transmit an uplink access slot, and wherein only access slots having indices

within the range 0 to 14 are valid," , " which is considered in combination with other limitations, as specified as, in the independent claim 46.

Regarding claim 51, the prior art fails to teach a method, comprising: receiving a parameter defining allowed access slots of a physically existing random access channel from a base transceiver station of a mobile communications network by at least one mobile station of a plurality of mobile stations of the mobile communications network; "wherein bit values of a binary expression of said parameter determine a combination of calculated indices obtained for other values of said parameter, said other values corresponding to binary weights of said binary expression," , " which is considered in combination with other limitations, as specified as, in the independent claim 51.

Regarding claim 76, the prior art fails to teach an apparatus, comprising: a processor configured to receive a parameter defining allowed access slots of a physically existing random access channel from a base transceiver station of a mobile communications network; "change a bit number of said parameter in dependence on said other parameter, and disable a transmission of a preamble signature or an acquisition indication in dependence on a value of said

parameter," , " which is considered in combination with other limitations, as specified as, in the independent claim 76.

Regarding claim 77, the prior art fails to teach an apparatus, comprising: a processor configured to receive a parameter defining allowed access slots of a physically existing random access channel from a base transceiver station of a mobile communications network, "change a bit number of said parameter in dependence on said other parameter, and calculate an index of an allowed uplink access slot on the basis of a value of said parameter and a frame number of a frame used for transmitting an uplink access slot," , " which is considered in combination with other limitations, as specified as, in the independent claim 77.

Regarding claim 78, the prior art fails to teach an apparatus, comprising: a processor configured to receive a parameter defining allowed access slots of a physically existing random access channel from a base transceiver station of a mobile communications network; "wherein a bit number of said parameter is changed in dependence on said other parameter, wherein an index of an allowed uplink access slot is calculated on the basis of the value of said

parameter and a frame number of a frame used for transmitting an uplink access slot, wherein said index is calculated by using the equation  $i = 3 \cdot N + (F \text{ modulo } 3)$  where  $0 \leq N \leq 2$ , wherein F and N are integers, and F denotes said frame number, and wherein only access slots having indices within the range 0 to 7 are valid," , " which is considered in combination with other limitations, as specified as, in the independent claim 78.

Regarding claim 79, the prior art fails to teach an apparatus, comprising: a processor configured to receive a parameter defining allowed access slots of a physically existing random access channel from a base transceiver station of a mobile communications network, "wherein a bit number of said parameter is changed in dependence on said other parameter, wherein an index of an allowed uplink access slot is calculated on the basis of the value of said parameter and a frame number of a frame used for transmitting an uplink access slot, wherein said index is calculated by using the equation  $i = 4 \cdot N + (F \text{ modulo } 4)$  where  $0 \leq N \leq 3$ , wherein F and N are integers, and F denotes a frame number indicating two consecutive frame numbers of said frame used to transmit an uplink access slot, and wherein only access slots having indices

within the range 0 to 14 are valid," , " which is considered in combination with other limitations, as specified as, in the independent claim 79.

Regarding claim 80, the prior art fails to teach an apparatus, comprising: a processor configured to receive a parameter defining allowed access slots of a physically existing random access channel from a base transceiver station of a mobile communications network, "wherein bit values of a binary expression of said parameter determine a combination of calculated indices obtained for other values of said parameter, said other values corresponding to binary weights of said binary expression," , " which is considered in combination with other limitations, as specified as, in the independent claim 80.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."



***Response to Arguments***

10. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHUONGCHAU BA NGUYEN whose telephone number is (571)272-3148. The examiner can normally be reached on Monday-Friday from 8:30 a.m. to 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Firmin Backer can be reached on 571-272-6703. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see

<http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/PHUONGCHAU BA NGUYEN/  
Examiner, Art Unit 2416

//Melvin Marcelo//  
Primary Examiner, Art Unit 2416  
November 21, 2008